# PDR RID Report

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**Review** SDPS
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**Category Name** User & Algorithm Models **Actionee** HAIS
**Sub Category**
**Subject** Standing Order versus Random Order Mix in User Modeling.

**Description of Problem or Suggestion:**

Version 0 shows strong (order-of-magnitude) sensitivity of distribution capacity to standing order vs. random order mix. The V0 SeaWIFS model is roughly 5:3.

What mix is used in the modeling presented?

**Originator's Recommendation**

Supply number/ratio for mix of standing vs. random orders. Investigate sensitivity of the model to variations in this mix.

**GSFC Response by:** **GSFC Response Date**

**HAIS Response by:** Eisenstein **HAIS Schedule** 5/22/95
**HAIS R. E.** A.Endal **HAIS Response Date** 6/5/95

The ratio of standing orders to random or "ad hoc" orders used in the PDR modeling was 10:11. This ratio was reflected in the service invocations produced from an analysis of the science user scenarios and demographics. The proportion of standing orders was higher than expected by ECS developers, but still lower than the 5:3 ratio used in the SeaWIFS model.
The 10:11 ratio is partially due to the way ECS users see themselves interacting with the system in the future. Because of anticipated ECS capabilities, it is expected that "analytical " users who will browse data, perform simple manipulations, and order the resulting products will be slightly more common than consumers who access the system to produce standing orders. The trend towards increasing numbers of users who order "on the fly" has been experienced in part by NCAR who has seen an exponential growth in the number of accesses that result in simple FTP orders. A continuing analysis of V0 statistics and other information sources by ECS modellers will identify whether this trend can be also expected for ECS.
The sensitivity of distribution capacity to standing order vs. random order can be examined by varying parameters in the performance model. Since standing orders are filled when the products are produced, whereas random orders are filled from the data server archives, this will affect traffic on the data servers. However, data server traffic is currently dominated by production data flows. Unless the ratio of standing orders to random orders changes dramatically, this ratio will not significantly affect system performance.

**Status** **Closed** **Date Closed** **6/8/95** **Sponsor** **Daly**

****** **Attachment if any** ******